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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,497	02/07/2001	Rainer Graumann	P00,1994	8814

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EXAMINER

MICHALSKI, JUSTIN I

ART UNIT	PAPER NUMBER
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2644

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DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,497

Applicant(s)

GRAUMANN, RAINER

Examiner

Justin Michalski

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ingalls (US Patent 4,607,383).

Regarding Claim 1, Ingalls discloses a garment (Figure 1) consisting of a neckband (28), having a microphone (10) integrated in the garment.

Regarding Claim 3, Ingalls further discloses a larynx microphone (Column 1, line 13).

Regarding Claim 5, Ingalls further discloses a cable (lead 20) connected to said microphone for transmitting signals from said microphone to a remote location (Column 3, lines 9-12), said garment having an interior (Figure 1, between outer layer of band 28 and neck) and an exterior and said microphone being disposed in the interior (Figure 1 and 2 disclose microphone being in the interior) of said garment, and said garment having an opening (inside of neckband 28 loop) through which said cable proceeds from

said interior of said garment to said exterior of said garment (Figure 1 discloses lead from microphone 10 to outside of garment).

Regarding Claim 7, Ingalls further discloses electrical filters are useful in shaping the response of a throat microphone (i.e. suppressing disturbing signals from the microphone) (Column 1, lines 56-60)

Regarding Claim 8, Ingalls discloses a communication system (Figure 1) comprising: a garment consisting of a neckband (neckband 28); a microphone integrated in said garment (microphone 10); and a reception unit disposed remote from said microphone (Ingalls discloses an external circuit (i.e. reception unit) (Column 3, lines 9-12); and a signal transmitting arrangement for transmitting signals, corresponding to voice signals picked up by said microphone, from said microphone to said reception unit (lead 20).

Regarding Claim 9, Ingalls further discloses signal transmitting arrangement comprises a cable electrically connecting said microphone and said reception unit (lead 20).

3. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Kettl et al. (US Patent 6,430,298). Kettl et al. discloses a garment (Figure 1) consisting of a facemask (facemask 6) having a microphone (Figure 5, microphone 4) integrated in the garment further comprising a contact (electrical contacts 36) electrically connected to the microphone disposed at an exterior surface of the garment (Figure 2, contact 44),

and a cable having a mating contact (cable 46), engageable with said contact (44), for transmitting signals from said microphone to a remote location.

4. Claims 6, 10, 11, 13, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Loftus et al. (US Patent 4,885,796).

Regarding Claim 6, Loftus et al. discloses a garment consisting of a facemask (Figure 2, mask 22) having a microphone integrated in the garment (transmitter 40 includes a microphone (Column 4, line 35) further comprising a wireless transmitter (transmitter 40) electrically connected to said microphone for wirelessly transmitting signals generated by said microphone to a remote location (Figure 1 discloses transmitter transmitting signals to receiver 44).

Regarding Claim 10, Loftus et al. discloses a communication system comprising: a garment selected from the group consisting of a facemask (Figure 2, mask 22); a microphone integrated in said garment (transmitter 40 includes a microphone (Column 4, line 35); and a reception unit disposed remote from said microphone (receiver 44); and a signal transmitting arrangement for transmitting signals (transmitter 40), corresponding to voice signals picked up by said microphone, from said microphone to said reception unit (Figure 1) wherein transmitting arrangement comprises a wireless transmitter (40) electrically connected to said microphone (transmitter 40 includes a microphone (Column 4, line 35) and located at said garment, and a wireless receiver (receiver 44) located at said reception unit for receiving signals from said wireless transmitter.

Regarding Claim 11, Loftus et al. discloses a communication system comprising: a garment selected from the group consisting of a facemask (Figure 2, mask 22); a microphone integrated in said garment (transmitter 40 includes a microphone (Column 4, line 35); and a reception unit disposed remote from said microphone (receiver 44); and a signal transmitting arrangement for transmitting signals (transmitter 40), corresponding to voice signals picked up by said microphone, from said microphone to said reception unit (Figure 1) wherein reception unit includes means for transmitting electrical signals produces by said microphone (cable 50), corresponding to voice signals, into at least one control signal for operating at least one device (transmitter 40 incorporates a voice actuated switch for controlling transceiver 48) (Column 3, lines 57-61).

Regarding Claim 13, Loftus et al. discloses a method (Figure 1) for controlling a device comprising the steps of: integrating a microphone into a garment (microphone is within transmitter 40 located within mask 22) (Column 4, line 35); speaking voice commands into said microphone, which are converted into electrical signals by said microphone (it is inherent that the microphone would transduce audio signals into electric signals); communicating said electrical signals to a reception unit (receiver 44) located remotely from said microphone; and from said reception unit, producing control signal for controlling at least one device located remote from said microphone (transmitter 40 incorporates a voice actuated switch for controlling transceiver 48) (Column 3, lines 57-61).

Regarding Claim 15, Loftus et al. further discloses a microphone integrated into a garment consisting of a facemask (microphone is within transmitter 40 located within mask 22) (Column 4, line 35).

Regarding Claim 19, Loftus et al. further discloses transmitting signals with a wireless transmitter in electrical connection with said microphone (signals from transmitter 40 to receiver 44), providing a wireless receiver (receiver 44) at said reception unit, and wirelessly transmitting said signals produced by said microphone from said transmitter to said receiver (Figure 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ingalls as applied to claim 1 above. Ingalls discloses a garment as discloses apropos of claim 1 above but does not disclose the garment worn in a medical operating environment. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the garment could be used within a medical operating environment for means of communication.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ingalls as applied to claim 1 above in view of Kettl et al. (US Patent 6,430,298). Ingalls discloses a garment as stated apropos of claim 1 above. Loftus et al. does not disclose the use of a mating contact. Kettl et al. discloses a garment (mask 6) which comprises transmitting an audio signal by electrically connecting a contact (contacts 36) to a microphone (Figure 5, microphone 4) and making contact accessible at an exterior surface of said garment (Figure 2, socket 44), connecting a mating contact at a first end of an electrical cable to said contact (plug 46), and connecting an opposite end of said cable to said reception unit, and transmitting said signals to a remote location (Figure 1, unit 48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mating contact to be able to disconnect a cable from microphone to allow unrestricted movement when the microphone is not in use.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ingalls as applied to claim 1 above in view of Loftus et al. (US Patent 4,885,796). Ingalls discloses a garment as stated apropos of claim 1 above but does not disclose wireless transmitting signals to a remote location. Loftus et al. discloses a garment (mask 22) which transmits an audio signal wirelessly to receiver 44. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a

wireless transmitter to eliminate the need for wires connecting the microphone to a remote device allowing the user to be more unrestricted.

9. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ingalls as applied to claim 8 above in view of Loftus et al. (US Patent 4,885,796).

Regarding Claim 10, Ingalls discloses a garment as stated apropos of claim 8 above but does not disclose wireless transmitting signals to a remote location. Loftus et al. discloses a garment (mask 22) which transmits an audio signal from a microphone within transmitter 40 located within the garment (Column, 4, line 35) wirelessly to receiver 44. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a wireless transmitter to eliminate the need for wires connecting the microphone to a remote device allowing the user to be more unrestricted.

Regarding Claim 11, Ingalls discloses a garment as stated apropos of claim 8 above but does not disclose signal controlling the operation of a device. Loftus et al. discloses a garment (mask 22) which includes an audio transmitter 40 which sends a signal to receiver 44. Receiver 44 includes a voice actuated switch for controlling the transceiver 48 between a transmitting and receiving mode (Column 3, lines 57-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made that an audio signal could be used to control a system as discloses by Loftus et al. for switching between receiving and transmitting a signal for communication.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ingalls as applied to claim 1 above in view of Matsuzawa et al. (US Patent 6,522,753). Ingalls discloses a garment as stated apropos of claim 8 above but does not disclose the reception unit including filters for signal suppression. It is well known in the art that filters can be used to suppress disturbing signals caused by noises such as disclosed by Matsuzawa et al. (Figure 3, filters 7-1 through 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include filters to suppress disturbing signals caused by noises for a cleaner audio signal.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loftus et al. as applied to claim 13 above. Loftus et al. discloses a method as stated apropos of claim 13 above but does not disclose controlling a device in a medical environment. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the receiver 44 could be placed and used within a medical operating environment for means of communication.

12. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loftus et al. as applied to claim 13 above in view of Ingalls (US Patent 4,607,383).

Regarding Claim 16, Loftus et al. discloses a method as stated apropos of claim 13 above but does not disclose the microphone being a larynx microphone. One skilled in the art at the time the invention was made would have known that microphones come

in different forms including a larynx microphone as disclosed by Ingalls (Figure 1).

Ingalls teaches that larynx microphones are advantageous in noisy environments since they rely on direct mechanical coupling to the larynx of the wearer (Column 1, lines 11-18). Therefore, it would have been obvious to incorporate a larynx microphone in order to eliminate noise from the environment that the user is in for a clearer audio signal.

Regarding Claim 20, Loftus et al. discloses a method as stated apropos of claim 13 above but does not disclose filter signals. Ingalls discloses electrical filters are useful in shaping the response of microphones (i.e. suppressing certain signals) (Column 1, lines 57-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made that filters could be used to shape and suppress signals from a microphone.

13. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loftus et al. as applied to claim 13 above in view of Kettl et al. (US Patent 6,430,298).

Regarding Claim 17, Loftus et al. discloses a method as stated apropos of claim 13 above but does not disclose a mating contact and a cable leading to the reception unit. Kettl et al. discloses a garment (mask 6) which comprises transmitting an audio signal by electrically connecting a contact (contacts 36) to a microphone (Figure 5, microphone 4) and making contact accessible at an exterior surface of said garment (Figure 2, socket 44), connecting a mating contact at a first end of an electrical cable to said contact (plug 46), and connecting an opposite end of said cable to said reception

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unit, and transmitting said signals via said cable (cable 47) to said reception unit (Figure 1, unit 48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a mating contact to be able to disconnect a cable from microphone to allow unrestricted movement when the microphone is not in use.

Regarding Claim 18, Loftus et al. discloses a method as stated apropos of claim 13 above but does not disclose a cable in connection with the microphone where cable goes through an opening to the exterior of the garment. Kettl et al. discloses a garment (mask 6) which includes an integrated microphone in the interior (microphone 4), wherein the steps of transmitting the signal from the microphone comprises of providing electrical cable (wires 38 and cable 47) in electrical connection with said microphone and guiding said cable through an opening in said garment (plug and socket 44 and 46) from an interior of said garment to an exterior of said garment, and connecting an opposite end of said cable to said reception unit (unit 48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a means for transporting a signal from the interior of the mask to the exterior of the mask in order to allow a signal to be sent to an external location by way of a cable.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang et al. (US Patent 5,757,929) discloses a garment with incorporated microphones including a wireless transmitter and leads through the garment.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on 8 Hours, 5 day/week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM


XU MEI
PRIMARY EXAMINER